CPS FINAL REPORT OUTLINE

25X1A5a2

1.0   SUMMARY (incl. Opn Concept)

2.0   INTRODUCTION

    2.1   Objective of Study

    2.2   Scope

    2.3   Study Approach

        (Study flow chart, organizational responsibility)

3.0   SYSTEM REQUIREMENTS

    3.1   Mission

        (Type of missions, mission profiles, scenarios)   25X1A5a2

    3.2   Security

        (Covert, AJ, visual, concealment, logistics)

    3.3   RPV

        (Range, Altitude, appearance, payload, etc.)

    3.4   Supporting Systems

        (Satellites, relays, ground systems)

4.0   RPV SUBSYSTEM STUDIES   25X1A5a2

    4.1   Communications

        4.1.1   Requirements

            (Data rates, error control, duty cycle, security, covertness, AJ E/No reqts, LOS and satellite relay, coverage area, interchangeability)

        4.1.2   Satellite Relay Systems

            (Applicable satellites characteristics, coverage)

        4.1.3   Link Analyses

            (Parametric relating RPV power, antenna, sensitivity as a function of data rate for applicable satellites and characteristics of ground stations, expected interference levels, propagation factors)

4.1.4   Detectability and Security Techniques

        (Modulation techniques, tactics, detecta-

        bility, jamming analyses, performance impact)

4.1.5   "A" System Applicability

        (Performance vs. requirements comparison

        modifications required)

4.1.6   Subsystem Preliminary Design

        (Configuration, physical and electrical

        characteristics, performance flexibility,

        installation requirements, interfaces)

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4.2   Aerobot Applications

4.2.1   Description

        (Physical, electrical characteristics,

        operation and performance)

4.2.2   Aircraft Considerations

        (Installation and performance variations,

        data required for pre-conditioning, applica-

        bility to various aircraft)

4.2.3   Packaging Design

        (Requirements, repackaging concept, assembly

        breakdown)

4.2.4   Installation

        (Logistics, general procedures, checkout,

        support, flow time)

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4.3   Sensor Studies

4.3.1   Navigation and Visibility Requirements

        (Navigation tolerance vs. mission scenario,

        display and data rate requirements as a func-

        tion or corridor width, airplane speed, alti-

        tude, visibility, wind uncertainty)

4.3.2   Navigation Sensor Evaluation

        (Brief description of characteristics, per-

        formance, of LORAN, Omega, NAVSAT, inertial,

        doppler and their applicability to this system)

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4.3.3 Checkpoint Sensor Evaluation
(Brief description of characteristics,
performance, of FLIR, DLTV, Radar, TERCOM,
ARDF, Airway Nav Aids, and their applicability
to this system.

4.3.4 Forward Look Sensor Evaluation
(Brief description of characteristics perfor-
mance of FLIR, FLTV, mapping radar, terrain
following radar, and their applicability to
this system)

4.3.5 Sensor Subsystem Design
(Configuration, physical and electrical char-
acteristics, installation reqts, data rates,
interfaces)   25X1A5a2

5.0 VEHICLE EVALUATION

(Identify applicable aircraft, range, payload capability,
compatibility with implementation concept)   25X1A5a2

6.0 RPV DESIGN

6.1 Configuration
(System block diagram, installation of equipment
in RPV, equipment list including size, wt., power)

6.2 Performance
(Payload wt, range, speed)

6.3 Installation
(Pre-conditioning required, procedure, support,
flow time)

6.4 Logistics
(Equipment packages, transportation)

6.5 Security
(Visual, concealment)   25X1A5a2

7.0 SYSTEM DEFINITION
(Air vehicle, satellite and ground complex definition)